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ECONOMIC IMPACT ANALYSIS
of visitors to
BANFF NATIONAL PARK
in 1991

CANADIANA

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Prepared by:

Alberta Economic Development
and Tourism

March 1994



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TOURISM ECONOMIC IMPACTS

BANFF NATIONAL PARK

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Disclaimer Letter

TO WHOM IT MAY CONCERN:

This Economic Impact Analysis has been completed by Alberta Economic Development and Tourism (ED&T) to estimate the economic impacts resulting from visitor spending in Banff National Park. This report has been completed at the request of the Banff Lake Louise Tourism Bureau.

This report is based on expenditure information sourced from the 1990 Alberta Non-Resident Travel Exit Survey, and the 1991 Alberta Resident Travel Survey. Alberta ED&T has utilized the Demand Economic Impact Model (DEIM) computer model to produce the results within the report, and disclaims any liability in negligence or otherwise for any damage which may occur as a result of reliance upon it.

DEIM is a computer model developed for ED&T and delivered in 1993. This model provides detailed economic impact information for a variety of different projects based on specific input details. Output detail from the DEIM model is restricted to impacts for a specific period, such as a construction phase, or to estimate the impacts from expenditures over a specific period, or from an event.

It is important to note that although the tourism expenditure information (input) is specific to Banff National Park, the economic impact information (output) is not specific to the Banff National Park. The DEIM model is able to express the outputs on a province wide and regional basis. In this instance, Banff National Park falls within the Banff economic region, which is delineated on the DEIM map at the back of the report.



Jim Engel

Assistant Deputy Minister
Small Business and Tourism Development

EXECUTIVE SUMMARY

The expenditures of visitors to Banff National Park generate significant economic impacts.

The Banff Lake Louise Tourism Bureau approached Alberta Economic Development & Tourism to provide an estimate of the economic impact from visitor expenditures. Expenditure information was available from existing survey databases including the 1991 Alberta Resident Travel Survey, and the 1990 Alberta Non-Resident Travel Exit Survey. The Demand Economic Impact Model (DEIM) was used to estimate economic impacts on a provincial and regional basis.

Economic Impact highlights include:

- Visitor expenditures in the Banff National Park were estimated to be in excess of \$505 million in 1991.
- These expenditures generated an economic impact (Value-Added) to the province of approximately \$614 million on a province wide basis in 1991.
- Approximately \$170 million in total taxation revenues accrue to all levels of Government as a result of visitor expenditures in Banff National Park. This includes about \$107.1 million to the Federal government, and \$44.8 million to the Provincial government.
- Visitor spending in Banff National Park sustains approximately 16,090 Person-Years of employment province wide.
- The employment impacts resulting from visitor spending in Banff National Park differs by industry sector. For example approximately 1,966 person-years of employment in Alberta's Agriculture sector is supported by visitor expenditures in Banff National Park. These expenditures also support about 2,727 person-years in Alberta's Trade and Finance Sector as well as about 1,060 person-years in the Utilities Sector.

NOTE: All of the above are estimates which include Direct, Indirect and Induced impacts.

EXECUTIVE SUMMARY

The expenditures of visitors to Banff National Park generate significant economic impacts.

The Banff Lake Louise Tourism Bureau approached Alberta Economic Development & Tourism to provide an estimate of the economic impact from visitor expenditures. Expenditure information was available from existing survey databases including the 1991 Alberta Resident Travel Survey, and the 1990 Alberta Non-Resident Travel Exit Survey. The General Economic Impact Model (GEIM) was used to estimate economic impacts on a provincial and regional basis.

Economic impact highlights include:

- * Visitor expenditures in the Banff National Park were estimated to be in excess of \$508 million in 1991.
- * These expenditures generated an economic impact equivalent to the province of approximately \$674 million or a province wide basis in 1991.
- * Approximately \$170 million in total taxation revenues accrue to all levels of Government as a result of visitor expenditures in Banff National Park. This includes about \$107.7 million to the Federal Government, and \$64.8 million to the Provincial Government.
- * Visitor spending in Banff National Park sustains approximately 15,080 Person-Years of employment province wide.
- * The employment impacts resulting from visitor spending in Banff National Park differ by industry sector. For example, approximately 1,988 person-years of employment in Alberta's Agriculture sector is supported by visitor expenditures in Banff National Park. These expenditures also support about 5,737 person-years in Alberta's Trade and Finance Sector, as well as about 1,060 person-years in the Utilities Sector.

NOTE: All of the above are estimates which include Direct, Indirect and Induced impacts.

INTRODUCTION

This report has been completed at the request of Banff/Lake Louise Chamber of Commerce to estimate the economic impacts resulting from expenditures of visitors to Banff National Park, including the Banff Townsite. The report was prepared by the Development Services Branch of Alberta Economic Development and Tourism. It examines the effects of tourism spending on the local, regional, and Provincial economy.

The report was compiled using the Department's Demand Economic Impact Model (DEIM) developed by Econometric Research Ltd. in 1993.

Visitor expenditure information was obtained from the 1990 Alberta Non-Resident Travel Exit Survey, and the 1991 Alberta Resident Travel Exit Survey. The figures from the 1990 study were adjusted to the common base year of 1991.

THE DEMAND ECONOMIC IMPACT MODEL (DEIM)

DEIM is a sophisticated computer model that uses input/output methodology to assess the impact of visitor expenditures on the local, regional and Provincial economy. A special feature of DEIM is the ability to estimate impacts as they relate to attractions and special events as well as capital development.

VISITOR PROFILE

Visitors to Banff National Park include Albertans, other Canadians, Americans, and overseas visitors. Albertans make up approximately 74% of the total visitors to Banff National Park.

VISITORS BY ORIGIN		
ORIGIN	Number of Visits	Percentage
Alberta	2,615,342	74.0%
All Other Visitors	918,904	26.0%
Total Visitors	3,534,246	100.0%

Source: 1991 Alberta Resident Travel Survey, 1990 Alberta Non-Resident Travel Exit Survey.

Figures from the 1990 Alberta Non-Resident Travel Exit Survey were adjusted to the common base year (1991).

VISITORS BY SEASON

Visitation to Banff National Park varied significantly by season. Winter was the most popular season, accounting for 40% of all visitors. The summer season was also strong with over 34% of all visitors. The spring and fall seasons combined account for the remaining 26% of all visitors.

VISITORS BY SEASON		
Spring	459,225	13.0%
Summer	1,215,626	34.4%
Fall	439,330	12.4%
Winter	1,420,065	40.2%
Total Visitors	3,534,246	100.0%

Source: 1991 Alberta Resident Travel Survey, 1990 Alberta Non-Resident Travel Exit Survey.

Figures from the 1990 Alberta Non-Resident Travel Exit Survey were adjusted to the common base year (1991).

EXPENDITURE BREAKDOWN BY INDUSTRY CATEGORY

Visitor expenditures are distributed across a wide range of tourism industry sectors. Accommodation and food service received the largest proportion of visitor expenditures (51.4%). The chart below depicts the spending by dollar value and as a percentage of the total. A detailed breakdown of expenditures by visitor origin is provided later in the report.

EXPENDITURE BY INDUSTRY CATEGORY		
Accommodation	\$133,192,894	26.4%
Camping Fees	\$ 3,945,674	0.8%
Meals & Refreshments	\$126,371,491	25.0%
Groceries	\$21,552,440	4.3%
Vehicle	\$49,274,662	9.8%
Car Rental	\$12,964,911	2.6%
Commercial Transport	\$48,328,832	9.6%
Recreation & Entertainment	\$42,627,753	8.4%
Registration Fees	\$ 4,828,134	1.0%
Retail Purchases	\$51,570,332	10.2%
Other	\$10,705,320	2.1%
Total Visitors	\$505,362,443	100.0%

Source: 1991 Alberta Resident Travel Survey, 1990 Alberta Non-Resident Travel Exit Survey.

Figures from the 1990 Alberta Non-Resident Travel Exit Survey were adjusted to the common base year (1991).

KEY FINDINGS

The expenditures of visitors to Banff National Park contribute significant economic benefits to Alberta's economy. Economic impact (Value-added) generated by visitor expenditures is estimated to be approximately \$614 million. Tax revenues to all levels of government are approximately \$170 million. Visitor spending in Banff National Park sustains approximately 16,090 person-years of employment province wide. Agriculture, Trade & Finance, and Utilities are key provincial economic sectors which benefit from these expenditures. Detailed results from the DEIM analysis are included in the sections that follow.

IMPACT SUMMARY

The tables on the next page reflect many of the total estimated Economic Impacts resulting from visitor expenditures in Banff National Park in 1991.

DEMAND ECONOMIC IMPACT MODEL (DEIM)

IMPACT SUMMARY

PROJECT NAME: BANFF NATIONAL PARK EXPENDITURE*: \$505,362,443
VISITORS IN 1991

LOCATION: BANFF NATIONAL PARK, ALBERTA

TAXES **	FEDERAL	PROVINCIAL	MUNICIPAL	TOTAL
PERSONAL INCOME TAX	\$62,646,428	\$26,848,469	\$0	\$89,494,897
INDIRECT BUSINESS TAX	\$0	\$4,683,874	\$0	\$4,683,874
GOODS & SERVICES TAX	\$27,818,178	\$0	\$0	\$27,818,178
TARIFFS	\$4,650,098	\$0	\$0	\$4,650,098
CORPORATE PROFITS TAX	\$11,992,009	\$5,387,714	\$0	\$17,379,723
PROPERTY TAX (Prov. Wide)	\$0	\$0	\$18,294,515	\$18,294,515
TOBACCO & LIQUOR TAX	\$0	\$1,285,769	\$0	\$1,285,769
ROOM TAX	\$0	\$6,659,645	\$0	\$6,659,645
TOTALS	\$107,106,713	\$44,865,471	\$18,294,515	\$170,266,699

** Taxation estimates are based on Direct, Indirect, and Induced Income

PROVINCE WIDE IMPACTS	DIRECT	INDIRECT & INDUCED	TOTAL
ECONOMIC IMPACTS (Value Added)	\$201,328,478	\$413,124,798	\$614,453,276
EMPLOYMENT (Person Years)	7,644.1	8,446.6	16,090.7

INTER – REGIONAL IMPACTS REGION	ECONOMIC IMPACT (Value Added)	EMPLOYMENT (Person Years)
MEDICINE HAT	\$7,780,890	287.6
LETHBRIDGE – WATERTON	\$26,678,206	929.8
CALGARY – DRUMHELLER	\$120,125,103	2,311.6
JASPER	\$24,902,972	554.9
BANFF	\$364,118,298	10,555.5
RED DEER – WAINWRIGHT	\$21,344,007	483.4
EDMONTON – LLOYDMINSTER	\$26,656,662	615.5
PEACE RIVER	\$201,625	3.9
ATHABASCA	\$22,645,513	348.5
TOTALS	\$614,453,276	16,090.7

*Expenditures sourced from 1990 Alberta Non-Resident Travel Exit Survey, and the 1991 Alberta Resident Travel Survey. Figures from the 1990 Alberta Non-Resident Travel Exit Survey were adjusted to the common base year (1991).

All values are provided in constant year dollar values (1991).

Some numbers may not add due to rounding.

Value Added is defined by Statistics Canada as "the value of production minus the value of materials, parts and energy used in production". The value-added is what is available to be shared among workers (in the form of wages), capital, (in the form of depreciation and interest payments to the bank), and owners (profits).

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EMPLOYMENT DISTRIBUTION BY INDUSTRY SECTOR

One of the capabilities of the DEIM computer model is that it can estimate employment by Industry Sector on a province wide basis as well as on a regional basis. The following two tables provide employment by industry sector both province wide and for the Banff region resulting from visitor expenditures in Banff National Park in 1991.

EMPLOYMENT DISTRIBUTION BY INDUSTRY SECTOR

PROVINCE WIDE

IN PERSON YEARS

EMPLOYMENT BY INDUSTRY

Agriculture	1,966.2	Forestry	4.5
Fishing	1.8	Non-Oil Mining	45.6
Oil & Oil Related	210.6	Food & Beverages	763.9
Rubber & Plastic	29.9	Primary Textiles	2.7
Clothing Industry	17.7	Wood Industry	7.9
Furniture	9.4	Paper & Allied P.	17.8
Printing & Publish.	172.3	Primary Metals	5.8
Metal Fabricating	45.2	Machinery & Equip.	30.5
Transport Equipment	9.4	Electrical Products	17.4
Non-Metal Minerals	16.9	Petroleum Products	51.3
Chemicals & Chem. P.	47.9	Other Manufacturing	28.8
Construction	68.5	Utilities	1,060.5
Trade & Finance	2,727.4	Services	8,325.9
Owner Occupied	0.0	Other Employment	404.9

16,090.7

Includes Direct, Indirect, and Induced Employment.

Some columns may not add due to rounding.

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EMPLOYMENT DISTRIBUTION BY INDUSTRY SECTOR

BANFF REGION

IN PERSON YEARS

EMPLOYMENT BY INDUSTRY

Agriculture	72.7	Forestry	0.4
Fishing	0.4	Non-Oil Mining	4.6
Oil & Oil Related	0.0	Food & Beverages	114.6
Rubber & Plastic	0.0	Primary Textiles	0.1
Clothing Industry	2.7	Wood Industry	0.4
Furniture	0.5	Paper & Allied P.	0.0
Printing & Publish.	43.1	Primary Metals	0.0
Metal Fabricating	0.0	Machinery & Equip.	0.0
Transport Equipment	0.0	Electrical Products	0.0
Non-Metal Minerals	1.7	Petroleum Products	0.0
Chemicals & Chem. P.	0.0	Other Manufacturing	3.6
Construction	10.3	Utilities	805.2
Trade & Finance	1,860.9	Services	7,382.4
Owner Occupied	0.0	Other Employment	251.9
			<u>10,555.5</u>

Includes Direct, Indirect, and Induced Employment.

Some columns may not add due to rounding.

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INPUT INFORMATION

The following two pages provide the detailed expenditure data which was utilized in the analysis, together with notes to provide background information on the studies and how the data is used.

BANFF NATIONAL PARK

VISITOR EXPENDITURES IN 1991

EXPENDITURE BY CATEGORY PROVIDES INPUT VALUES FOR DEIM MODEL

EXPENDITURE CATEGORY	CANADA OTHER	USA	OVERSEAS	ALBERTA	TOTALS
ACCOMMODATION	\$15,363,275	\$36,929,018	\$31,709,901	\$49,190,700	\$133,192,894
CAMPING FEES	\$527,227	\$1,418,089	\$311,358	\$1,689,000	\$3,945,674
MEALS & REFRESHMENTS	\$14,306,110	\$23,037,461	\$27,670,820	\$61,357,100	\$126,371,491
GROCERIES	\$2,439,009	\$2,327,043	\$3,381,588	\$13,404,800	\$21,552,440
VEHICLE	\$4,625,291	\$5,039,567	\$2,098,104	\$37,511,700	\$49,274,662
CAR RENTAL	\$2,852,175	\$4,754,021	\$3,932,115	\$1,426,600	\$12,964,911
COMMERCIAL TRANSPORT	\$3,221,488	\$15,589,831	\$20,522,813	\$8,994,700	\$48,328,832
RECR. & ENTERTAINMENT	\$4,769,734	\$4,613,502	\$4,006,117	\$29,238,400	\$42,627,753
REGISTRATION FEES	\$1,240,354	\$779,207	\$812,473	\$1,996,100	\$4,828,134
RETAIL PURCHASE	\$5,731,028	\$8,163,684	\$17,874,120	\$19,801,500	\$51,570,332
OTHER	\$3,990,261	\$1,103,791	\$1,776,868	\$3,834,400	\$10,705,320
TOTALS	\$59,065,952	\$103,755,214	\$114,096,277	\$228,445,000	\$505,362,443

Please see the notes on the following page for more information regarding these input values.

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NOTES TO TABLE
BANFF NATIONAL PARK VISITOR EXPENDITURES
1991

Travel Surveys

The expenditure data in the preceding Table was obtained from two detailed visitor surveys conducted in Alberta. The 1990 Alberta Non-Resident Travel Exit Survey was undertaken to survey those visitors who do not reside in Alberta. This information is broken down into three groups; Canadians from provinces or territories other than Alberta, visitors from the United States, and visitors from overseas points of origin. This survey was undertaken at the different exit points in Alberta, and includes some 18,400 personal interviews.

The 1991 Alberta Resident Travel Survey provides the same type of detailed expenditure information as the Non-Resident Travel Exit Survey. This study was completed with approximately 17,500 Albertans being surveyed by telephone.

Common Base Year

In order to effectively utilize the data, the results from the 1990 Alberta Non-Resident Travel Exit Survey are adjusted to reflect the common base year of 1991. This has been accomplished by adjustment for inflation and visitor growth or decline. The resulting adjusted data provide a basis on which to draw information such as that presented in the preceding Table.

Allocation of Expenditures to Tourism Zones

Expenditures are allocated to each of Alberta's 14 Tourism Zones based on the proportion of the total nights of the entire Alberta trip which were spent in that particular Tourism Zone. For example, if 2 nights out of an Alberta trip of 5 nights were actually spent in the Banff National Park 2/5 of all expenditures for that respondent would have been apportioned to Banff National Park. The apportioning of expenditures is performed on all categories (e.g. 2/5 of accommodation spending would be attributed to Banff National Park 2/5 of all meals/refreshments would be attributed to Banff National Park etc.).

In cases where the entire Alberta trip length was one day (no overnight stops), all expenditures are allocated to the Tourism Zone identified as the zone of main destination in Alberta.

Travel Packages

An estimated \$113,310,333 in visitor expenditures allocated to Banff National Park fall into the category of travel packages. Travel packages are sold to include a variety of expenditures, but consistently include accommodation, transportation, and some meals. In order to account for this expenditure the travel package expenditures are arbitrarily allocated 40% to accommodation, 40% to commercial transportation, and the remaining 20% to food.

ANALYSIS & MULTIPLIERS

The following two pages provide more detailed information on other types of economic impacts as well as multipliers and added commentary.

Impact Province Wide

ECONOMIC IMPACT VISITORS TO BANFF NATIONAL PARK
All Projects Combined

Year of expenditures: 1991

Demand Side

Dollars Impacts *

Expenditures \$505,362,443

An Expenditure of \$505,362,443 in the Banff region will generate a substantial amount of income, employment, and tax benefits province wide.

Sales
 Direct \$505,362,443
 Total \$1,078,834,029
 Multiplier 2.13

These expenditures sustain a total Sales volume of \$1,078,834,029, whereas the Gross Provincial Income (GPI) is increased by \$614,453,276, and Wages and Salaries account for \$345,007,316 or 56% of total GPI.
The Sales multiplier is calculated by dividing total sales by total expenditures.

Income (GPI)
 Direct \$201,328,478
 Total \$614,453,276
 Multiplier 1.22

The Income (GPI) multiplier is calculated by dividing total income by total expenditures.

Wages & Salaries
 Direct \$123,807,372
 Total \$345,007,316

Direct wages per employee are \$16,196.
Total wages per employee are \$21,441.

Employment (Person Years)
 Direct 7,644
 Total 16,091
 Multiplier 2.10

A total of 16,091 person years of permanent annual full-time job equivalents are associated with these expenditures.
A total of 31.8 person years are sustained per one million dollars of expenditure.
The Employment multiplier is calculated by dividing total employment by direct employment.

Alberta assumes no responsibility for the accuracy or reliability of this information

Impact Province Wide (Continued)

ECONOMIC IMPACT VISITORS TO BANFF NATIONAL PARK

Year of expenditures: 1991

Imports

Other Count.	\$61,257,810	6 % of Sales
Other Prov.	\$154,481,433	14 % of Sales
Total	\$215,739,243	20 % of Sales

A certain volume of Imports is needed to sustain these expenditures. Total Imports account for 20% of Sales.

Taxes

Municipal	\$18,294,515	4 % of Expenditure
Provincial	\$44,865,471	9 % of Expenditure
Federal	\$107,106,713	21 % of Expenditure
Total	\$170,266,699	34 % of Expenditure

Taxes will accrue to all levels of government as income is generated and sales are made to sustain the new demand. A total of \$170,266,699 will be collected; of which the federal government's share is \$107,106,713, whereas the provincial government's is \$44,865,471, and the local government's is \$18,294,515.

Summary

On a per dollar basis, these expenditures will result in an Income Multiplier of 1.22 and an Employment Multiplier of 2.10. Tax revenues on a per dollar of expenditure basis are 34 cents for total Taxes, 21 cents for the federal government, 9 cents for the provincial government, and 4 cents for the local government.

* please consult glossary of terms in the manual

GLOSSARY OF TERMS AND REPORT DEFINITIONS

Balance:

This is the balance of payments between the Province of Alberta and the rest of the world. Here it is calculated as the difference between exports and imports.

Consumption:

The value of goods and services used by households.

Direct Exports:

These are the sales of goods and services to non-residents made on-site of the project.

Disposable Income:

Total income net of personal income taxes.

Employment:

The amount of labour time used in production, measured in person-years.

Exports:

This is the sale of goods and services to non-residents of the province.

Final Output:

Is the output of the economy which will not undergo further processing in the economy. It is also equal to the value-added to the economy.

Gross Provincial Income:

The total value of payments to productive factors. It represents the sum total of wages, and salaries, interest payments, rent and profits.

Imports:

This represents the value of goods and services purchased from non-residents of the province.

Import Replacement:

This is the value of goods and services that residents of Alberta would have purchased outside of the province in the absence of the projects.

Intermediate Output:

Is the output of the economy which will be used for further processing in the economy.

Investment:

Spending on new capital goods, including equipment and structures, and inventories.

Labour Income:

The total value of wages and salary payments to employees.

Multipliers:

This is a measure derived by adding direct, indirect and induced effects (total) and dividing the total thus derived by the original expenditure (revenue). For instance, the income multiplier associated with a given project is equal to total income divided by the original revenue. Only the employment multiplier is calculated differently. The latter is generated by dividing total employment by direct employment. This difference is necessitated by the fact that using the general definition in the case of employment results in dividing employment in person-years by dollars of revenue. This would not yield a unitless measure as the multiplier is supposed to be.

Revenue:

The definition of revenue here is slightly different from the customary one. It includes the total cost of operating a business plus net profits and depreciation. Taxes on corporate profits and on business property are also included. Only one item is excluded and that is the payment of interest on loans.

Sales:

This is the total value of goods and services sold by businesses during the year in sustaining the project's normal year operations. Direct sales include the value of goods and services bought for on-site operations. They include only a portion of revenues of the projects; excluded are taxes, depreciation, wages and salaries, and net profits. Total sales include all the turnover of goods and service needed to sustain the project on-site and off-site.

Taxes:

The model includes a number of taxes; each is linked directly with the level of government receiving it. For example, tariffs on imports are received only by the Federal government, whereas business and property taxes are received solely by local (municipal) governments. On the other hand, corporate and personal income taxes are shared between the Federal and Provincial governments.

Value-Added:

This is a measure of net output. It avoids double counting of products sold during the accounting period by including only final goods. For instance, only chairs are included, whereas the wood that goes into making them does not appear separately. It is equal to income (GPI). It may be calculated by adding wages, interest, rent and profits. Alternatively, it is equal to revenues minus the cost of purchased units.

DEIM MAP

The Demand Economic Impact Model (DEIM) divides the province into 9 economic regions. DEIM estimates how economic impacts are distributed to each of the 9 economic regions. The map on the next page delineates these regions.



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